X

PROGRESS REPORT

OF

FOREST ADMINISTRATION

IN

AJMERE

AND

REPORT ON THE OPERATIONS OF THE FOREST SURVEY

FOR

1878-79,

WITH THE ORDERS OF THE GOVERNMENT OF INDIA.

1880.

CALCUTTA:
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No. 980 F, dated Fort William, the 17th December 1879.

From—C. BERNARD, Esq., C. S. I., Offg. Secretary to the Govt. of India, Home, Revenue and Agricultural Department.

To—The Chief Commissioner of Ajmere.

I AM directed to acknowledge the receipt of your Secretary's letter No. 3074 S, dated the 22nd October last, submitting with remarks the report of forest administration in Ajmere and Merwara for the year 1878-79, and to communicate the following observations thereon.

2. The area of the State forests taken up under the Regulation is reported to have remained unchanged at 64,428 acres. The boundaries are stated to be in good order, and an additional length of fencing of 18,758 running feet of hedges and stone walls has been made. As compared with 1877-78, there was a small increase in the number of prosecutions and convictions on account of forest offences in both districts, the totals for the year being—

	Cases.	Persons.
Prosecutions	153	438
Convictions	131	316

3. As in previous years, special arrangements for protection against fire were made in the case of some of the larger tracts in Merwara (Biliawas, Todgarh and Anspahar), but apparently the other State forests were also protected. If so, they should all be entered in the return (Form No. 47) which is intended to exhibit the areas actually protected from fire during the year.

It is satisfactory that the only fires reported to have occurred in the State forests were 177 acres burnt in the Nag Pahar tract, and 27 acres in the Todgarh tract. In regard to the last-named occurrence, the Commissioner states that it is the only fire which has happened in this tract since 1875.

4. According to paragraph 33 of the Commissioner's report, the financial results of forest administration in Ajmere and Merwara during the seven years of its existence from 1872-73 have been as follows:

		Rs.	Rs.
Receipts		...	6,031
Charges	A "Conservancy and Works" ...	74,947	
	B "Establishments"	66,927	
			1,41,874
	Net outlay ...		1,35,843

5. The result of this outlay is the demarcation, protection and improvement of forests, aggregating 64,428 acres. This is only a small portion, viz., about 11 per cent. of the 588,647 acres stated to be the barren and fallow area of the district. If, as would appear from the Commissioner's remarks in the present and previous report, the effects of the demarcation and improvement of these areas have been beneficial; if also the measure is not felt as a hardship by the people, and if in your opinion a further extension of forest conservancy over these hills and waste lands will materially increase the prosperity of the district, then the question of extending operations over a larger area will, the Government of India feel assured, receive your careful consideration. The Governor General in Council trusts that the experience which has been gained at considerable expense will enable the local officers in future to effect the demarcation, protection and improvement of additional areas at much less cost.

6. The figures for 1878-79 were as follows:

	Rs.
Receipts	1,241
Charges	13,445
Excess charges ...	12,204

Of the outlay Rs. 2,694 was for plantations, Rs. 581 for fire protection, and Rs. 8,263 for establishments.

Efforts should be made to secure an increased revenue.

7. The essential portions of the Commissioner's report will be printed and circulated as usual. Several detailed returns appended to it have been omitted, and others have been condensed, so as to diminish the cost of printing; and it is suggested that future annual reports may give a more summary account of the forest operations in Ajmere and Merwara.

No. 990 F.

Copy of the above, with a copy of the report, forwarded to the Foreign Department for information.

AJMERE FOREST ADMINISTRATION REPORT FOR 1878-79.

No. 3074 S, dated Mount Abú, the 22nd October 1879.

From—Major J. P. STEEL, R. E., Secretary to Agent, Governor General, and Chief Commissioner in the Public Works Department, Rajputana.

To—The Offg. Secretary to the Government of India.

I AM directed by the Chief Commissioner to submit the annual report of forest administration in Ajmere for 1878-79. The Chief Commissioner regrets that there should have been so much delay in its submission, and he will endeavour to arrange that it shall be prepared more punctually in future.

2. It will be observed that the contemplated extension of the reserved tracts has been deferred, pending the receipt of a report from the Inspector General of Forests; and also that the preparation of a forecast has been postponed for the same reason. It is understood that a report from the Inspector General is under preparation, and therefore Major Bradford will not issue any orders until the receipt of that report.

3. Fair progress is reported in new fencing and planting; and it is said that the Thákúrs are beginning to initiate a system of protectionf on their own estates. Major Bradford will endeavour to encourage this.

4. The Commissioner hints in paragraph 37 of his report that the superintendence of a trained forest official might be advantageous. The Chief Commissioner is of opinion that this is a question that may usefully be referred to the Inspector General of Forests, and that the recommendation of that officer should be acted upon. Under any circumstances Major Bradford thinks that an annual inspection by a competent forest officer is very desirable, and he hopes that the Government of India may be able to arrange for this being done.

No. 106 F, dated the 7th October 1879.

From—L. S. SAUNDERS, Esq., Commissioner and Conservator of Forests, Ajmere-Merwara.

To—The Secretary to the Chief Commissioner in the Public Works Department, Rajputana.

I HAVE the honour to submit the annual progress report on the administration and working of the forest reserves in the Ajmere-Merwara Districts for the year 1878-79.

SUMMARY.

2. Dr. Brandis, the Inspector General of Forests, accompanied by Mr. E. McA. Moir, the Deputy Conservator of Forests, who previously held charge of Ajmere Forests, paid a visit of inspection to these districts, and visited in detail almost every tract. I have not, however, as yet received a copy of the inspection report of the Inspector General of Forests, or the Government orders passed thereon. I also visited myself almost all the forest tracts and some of the fire lines along the Marwar boundary in Merwara.

3. During the year Mahomed Anwar Khan, the Sub-Assistant Conservator of Forests, who previously held charge of the reserves both in Ajmere and Merwara, was placed in charge of all tanks and forests in the Merwara District alone, while Munshi Chhuttan Lal, the Superintendent of Irrigation, was placed in charge of both forests and tanks in the Ajmere District with effect from the 1st

May 1878. This arrangement eventually received the sanction of the Chief Commissioner in your No. 8 C S, dated 25th January 1879, and this sub-division of duties has worked well. Tanks are, of course, Mahomed Anwar Khan's weak point, and trees are Munshi Chhuttan Lal's stumbling block; the same ground had to be travelled over in visiting tanks and forests, and there appeared no reason why one intelligent officer should not do both works. Much advantage has arisen from this combination of duties also from each official being entirely under the control of only one Assistant Commissioner instead of having two superiors over him. Mr. Moir, in a demi-official memorandum, states that the main nursery in the neighbourhood of Ajmere was not fully stocked, and it may eventually perhaps be found desirable to place both the nurseries under the supervision of the trained forest official.

4. During the year the following works were undertaken:

I.—Repairs to roads and buildings.

II.—Plantations

III.—Protection from fire.

IV.—Construction and repairs to fencing.

V.—General supervision and conservancy of forest tracts.

Reserved Forests.

Area.

5. During the year 1878-79 the areas of forest tracts taken up under the forest regulation entered in the previous reports at 64,428 acres remained unaltered; of this area 349 acres were brought under plantations in the previous years, and an addition of 80 acres was made during the year under report, making a total of 379 acres. This area, although entered in statement of plantations (Form No. 46), has not been excluded from the statement of reserves (Form No. 45) under orders of the Government of India contained in their No. 438 F, dated 23rd May 1879. No alteration was made in the area of the Shikast Masjid plantation, entered in last year's report, as six acres besides the attached hill measuring some 21 acres, are under conservancy. The area of the four nurseries was reported last year at 5 acres, while that on the 31st March 1879 stands as follows:

Name of District.	Name of Nursery.	Area on the 31st March 1878.	Area on the 31st March 1879	Difference.
		A.	A.	A.
Ajmere	Main nursery	1	1	
Ditto ...	Shahjahani	11	11	
Ditto ..	Bibi Chihla	9	9	
Merwara	Beawar	32	28	—4
	Total ...	53	49	—4

6. Of the 32 acres of the Beawar nursery, five acres were taken up for the line of the Rajputana State Railway, which passes through a portion of the attached plantation, leaving 27 acres to which one acre of land on the Eastern side, made over by the Municipal Committee, has to be added. The total area of the Beawar nursery and parade plantation is now 28 acres. The area of Shahjahani and Bibi Chihla nurseries entered above is the total area of the Nazul gardens, only a portion thereof being under nursery cultivation. The actual area used as a nursery varies from time to time, and so the whole area has been allowed to stand.

7. The following statement shows the total area in charge of the Forest Department:

	Area on the 31st March 1878.		Area on the 31st March 1879.	
	Square miles.	Acres.	Square miles.	Acres.
Reserved tracts including the portion under plantation—				
Ajmere District	17	443	17	443
Merwara ditto	83	635	83	635
Total ...	100	428	100	428
A Nazul patch called Shikast Masjid Hill not acquired under forest regulation, but put under conservancy	.....	...	.....	21
Ditto ditto under plantation	.....	6	.....	6
Nurseries—				
Ajmere	.....	21	.....	21
Merwara	.....	32	.....	28
Total ...	100	467	100	504

8. The subjoined table shows the area of reserves taken up by the regulation, and the proportion borne by them to the area of each Tahsil, giving a percentage of from 5 to 19·8:

Name of Tahsil	Area recorded in settlement.			Area of reserved forest tracts.	Percentage on the	
	Barren.	Fallow.	Total.		Total area recorded as barren.	Total of barren and fallow.
	A.	A.	A.	A.	A.	A.
Ajmere Tahsil	111,303	107,721	219,024	11,323	10	5
Beawar do.	146,234	21,301	167,535	13,057	8 9	7·7
Todgarh do.	191,212	10,876	202,088	40,048	20 9	19 8
Total ...	448,749	139,898	588,647	64,428	14	11

It will appear from the above statement that the area in charge of the Forest Department is nearly 11 per cent. of the barren and fallow area of the district. In all the three Tahsils there yet remains a very large area of barren land, and it was proposed to take up another forest reserve consisting of 15,210 acres, viz., the Dewair tract situated to the extreme South-West of Merwara. In accordance with the orders of the Chief Commissioner contained in your No. 5 C S, dated 25th January 1879, the boundaries of this tract have been adjusted, and 51 masonry pillars have been erected, but the formal submission of the proposal to assume the tract is deferred pending receipt of the Inspector General of Forests' inspection report, who was asked to visit and report upon the advisability of taking it up.

9. The tracts are doubtless growing thicker from year to year, and it may perhaps be desirable to cut and sell some wood and undergrowth from the Todgarh, Chang, and Nag Pahar tracts. This matter was also left for notice by Dr. Brandis and Mr. Moir after inspection of the forest reserves. The Assistant Commissioner, Ajmere, thinks, and I agree with him, that a fair income might now be obtained by thinning out certain reserves, provided a reliable man acquainted with forest management could be deputed to supervise these thinning operations. The boundary pillars of the various tracts are in good order.

Protection and Improvement.

Establishment.

10. Mahomed Anwar Khan, Sub-Assistant Conservator of Forests, was first appointed here on Rs. 150. He was subsequently promoted to Rs. 200 by an annual increment of Rs. 25, the first increment commencing from the 1st September 1877, and he began to draw Rs. 200 from the 1st September 1878. The office establishment during the year consisted of—

	Rs.
1 Clerk	70
1 Munshi	40
3 Chaprasis, at Rs. 5 each	15
Total per month ...	125

and has cost Rs. 1,494-1-9

11. The protective establishment employed during the year consisted of—

	Ajmere.		Merwara.	
	Number.	Salary.	Number.	Salary.
		Rs.		Rs.
Foresters	1	14	1	15
Ditto	...	...	1	12
Ditto, at Rs. 10 each	...	...	2	20
Forest guards, at Rs. 8 each	3	24	...	...
Ditto at Rs. 7 each	6	42	16	112
Ditto at Rs. 6 each	5	30	3	18
Total ...	15	110	23	177

There were, however, some savings, and the actual cost of the establishment stands as under—

	Rs.	A.	P.
Ajmere	1,279	8	5
Merwara	1,969	0	0
Total ...	3,248	8	5

Distributed according to the various forest tracts, the establishment and its cost stand as follows :

Name of Tract.	Area in acres.	Number of		Cost of Establishment.			Area per guard.	Cost per acre.
		Foresters.	Guards.	Actual.	Share of general charges.	Total.		
				Rs As P	Rs As P.	Rs. As. P		Rs. As. P.
AJMERA DISTRICT.								
Mohwa-Madar	3,813	...	3	242 0 0	36 9 6	278 9 6	937·3	0 1 7
Nag Pahar	3,660	...	3	229 0 0	34 10 0	263 10 0	886·6	0 1 7
Taragarh Valleys	1,016	...	3	249 8 0	37 11 5	287 3 5	338·6	0 4 6·2
Srinagar-Bir	3,575	...	3	246 0 0	37 8 0	283 8 0	1,191·6	0 1 9·8
Rajasel	1,260	...	2	143 0 8	21 9 1	164 9 9	630	0 2 1
General	...	1	...	168 0 0	—168 0 0	.....	...	... ..
Total ..	11,323	1	14	1,279 8 5	.....	1,279 8 5	808·8	0 1 9·7
MERWARA DISTRICT.								
Chang	3,341	1	2	274 0 0	16 15 11	290 15 11	1,170·5	0 1 11·3
Hattun and Sheopura ...	1,320	...	2	156 0 0	9 10 9	165 10 9	660	0 1 6·5
Billawas and Taragarh ...	3,172	1	2	286 0 0	17 13 9	303 13 9	1,586	0 1 6·5
Todgarh and Barakhan ...	40,048	1	6	665 0 0	41 4 0	706 4 0	6,674·6	0 0 3·3
Belwara-Chang Bira	235	...	1	72 3 0	4 7 6	76 7 6	235	0 5 2·5
Rorwar-Kotra	3,923	...	3	221 0 0	13 11 4	234 11 4	1,307·6	0 0 11·5
Ana Pahar	1,466	...	2	178 0 0	11 0 9	189 0 9	733	0 2 0·8
General	...	1	...	115 0 0	—115 0 0	..	...	... .
Total ...	53,105	4	18	1,969 0 0	.....	1,969 0 0	2,950	0 0 7·1
Grand Total ...	64,428	5	32	3,248 8 5	.....	3,248 8 5	2,013·4	0 0 9·6

In the Merwara District the sanctioned number of forest guards is 19, but the actual number employed was only 18. The area per guard varies from 338·6 to 1,191·6 acres in the Ajmere District, while that in the Merwara District varies from 235 to 6,674·6 acres. The guards are distributed according to the actual necessity of each tract; they are barely sufficient for proper control. The Assistant Commissioner, Ajmere, recommends the appointment of an additional guard in the Srinagar tract, the tract being a large one, and exposed to continual trespass; but until I have seen Dr. Brandis's report, I defer making any recommendations. The protective establishment is at present temporary. Proposals for permanent establishment were made by Mr. Moir in accordance with Government of India orders contained in their No. 2422 G, dated 29th August 1877, but the submission thereof remains pending Dr. Brandis's report.

Prosecutions.

12. The following statement shows the number of prosecutions and convictions obtained as compared with 1877-78:

Name of Division.	Prosecutions.						Convictions.					
	1877-78.		1878-79.		Difference.		1877-78.		1878-79.		Difference.	
	Cases.	Persons.	Cases.	Persons.	Cases.	Persons.	Cases.	Persons.	Cases.	Persons.	Cases.	Persons.
Ajmere ...	100	314	107	230	+7	−84	90	285	94	195	−2	−90
Merwara ...	32	154	46	208	+14	+54	28	68	37	121	+9	+53
Total ...	132	468	153	438	+21	−30	124	353	131	316	+7	−37

Ajmere District.—During the year 107 cases involving 230 persons against 100 cases and 314 persons in 1877-78 were prosecuted, viz., two persons for not rendering assistance in extinguishing a fire on the Nag Pahar Hill; 100 cases involving 213 persons for an authorised felling or appropriation of wood and minor produce; and six cases involving 15 persons for grazing without permission. Convictions were obtained in all cases, but 13 or 87·85 per cent. of the 230 persons prosecuted 195 or 84·7 per cent. were punished, the rest being released. In Merwara there was a slight increase in prosecutions and convictions: 46 cases of breach of forest rules involving 208 persons occurred, against 32 cases and 154 persons in 1877-78. Of 208 persons sent up for trial 177 were prosecuted for felling trees or stealing wood and other jungle produce, and 31 for grazing cattle without permission; 121 persons, or 58·17 per cent., were convicted, the rest being released.

13. The following tools were confiscated from persons found cutting wood, &c., in the reserved forests:

Name of Division.	Name of tract.	Daranis.	Axes.	Hoes.	Khurpis.
Ajmere	Mohwa-Madar	28	30	1	2
Ditto	Nag Pahar	45	8	...	...
Ditto	Taragarh Valleys	5	2	...	...
Ditto	Srinagar-Bir	55	9	1	...
Ditto	Rajaosi	3	...	...	...
	Total ...	136	49	2	2
Merwara	Todgarh	8	10	...	...
Ditto	Chang	24	5	...	...
Ditto	Sheopura	7	4	...	...
	Total ..	39	19	...	...
	Grand total ...	175	68	2	2

14. The following cattle were impounded :

Name of Division and Tract.	Cows.	Bullocks.	Calf.	Buffaloes.	Male buffaloes.	Young buffaloes.	Goats.	Sheep.	Donkeys.	Ponies.	Camels.	Total.
AJMERE.												
Mohwa-Madar												423
Nag Pahar												241
Taragarh Valleys				Details not available.								242
Srinagar-Bir												836
Rajaori ...												49
Total ...	...	...	...	...	..	...	...	...	...	...	...	1,791
MERWARA.												
Beawar Nursery	38	13	...	...	2	...	10	...	87	14	5	178
Delwara Chang Bira												
Chang, Borwar-Kotra	117	95	93	70	23	19	101	...	15	3	6	542
Biliawas, Hattun, Aus	202	120	57	37	30	7	31	...	...	..	...	484
Pahar and Sheopura . ..												
Todgarh	153	21	81	20	10	11	541	278	...	..	...	1,115
Jawaja Road		..	..	4	1	50	..	...	..	...	...	55
Total ...	510	249	231	131	66	87	692	278	102	17	11	2,374
Grand total ...	..	..	...	...	..	...	.	...	..	...	...	4,165

The fines realized from the cattle impounded are at present credited to the pound fund. As, however, the cattle are impounded under Forest Byelaw No. X., it is a question whether the fines should not be credited to forest revenues in accordance with Byelaw No. XIII. The Assistant Commissioner, Ajmere, recommends that the Forest Department should receive an annual grant, and there seems some justice in this recommendation. The Assistant Commissioner will be called on to report separately on this subject.

FIRE PROTECTION.

15. The expenditure for prevention of fires has been in the last two years—

Name of Tract.	1877-78.	1878-79.	Difference.
	Rs. As. P.	Rs. As. P.	Rs. As. P.
Todgarh Tract	151 5 4	474 14 4	+323 9 0
Biliawas ditto	33 10 0	54 15 6	+ 21 5 6
Aus Pahar ditto	32 10 0	80 4 0	+ 47 10 0
Nag Pahar ditto	.....	15 0 0	+ 15 0 0
Total ...	217 9 4	625 1 10	+407 8 6

These figures are not for the Financial year but from 1st July to 30th June. The usual precautions against fire in the Biliawas Aus Pahar and Todgarh tracts in the Merwara District were taken. In the Todgarh tract the old fire lines measuring 49 miles and 45 chains long and 60 feet to 70 feet broad running along the Marwar boundary were cleared at a cost of Rs. 300 or nearly Rs. 6-0-3 per mile. A

new fire line costing Rs. 80-2-6, and measuring 6 miles long and 60 feet to 70 feet broad, was constructed from Dabgabra to Sili-Beri and Kachh-Bali, and six fire watchers were entertained during the hot season at a cost of Rs. 94-11-10. The tract has been divided into seven portions as follows:

1. Assan to Bagri.
2. Bagri to Belpana.
3. Belpana to Devi Sarupan.
4. Devi Sarupan to Modia.
5. Modia to Dadalia.
6. Dadalia to Dabgabra.
7. Ditto to Kachh-Bali.

A fire, however, broke out in the Marwar jungle on the 4th April 1879 at noon, and the conflagration driven by the wind reached the Government forest at 4 in the afternoon. It was extinguished without much difficulty by the police with the assistance of the neighbouring zemindars before midnight. Twenty-seven out of the 40,048 acres attempted to be protected were affected by fire; the damage it is said was almost entirely confined to the grass jungle, comparatively few trees being injured. This is the only fire I have to record in this tract since 1875. A detailed report was made in this Office No. C—155, dated 14th July 1879. I visited some of these fire lines and found them defective, I regret to say; they are in most inaccessible spots, and the Sub-Assistant Conservator had evidently neglected proper supervision. In the Biliawas tract the fire line constructed in previous years running from Soniana and Urna-Ka-Baria to Bhadi in Meywar measuring 251 chains long and 60 feet broad was cleared at a cost of Rs. 54-15-6 or 0-3-6 per chain. In the Ans Pahar tract the fire line cut the previous year measuring 404 chains in length and 60 feet to 70 feet in width was repaired and cost Rs. 80-4-0 or As. 3-2 per chain.

16. In the Ajmere District a portion of the Nag Pahar tract caught fire on the 26th March 1879 apparently from a flash of lightning; it was extinguished by the forest establishment, assisted by the police and zemindars of Pokar. The zemindars of Hathi-Khera failed to render prompt assistance when required by the Forest Department. They were, therefore, prosecuted under my orders and fined Rs. 100. The conflagration extended to an area of 177 acres, but little damage was however done.

17. The proper supervision of the construction of these fire lines is of primary importance, and the Sub-Assistant Conservator is of little use if he fails to see that they are properly made and kept up.

Fencing.

18. Eighteen thousand seven hundred and fifty-eight feet of fencing was added to the fencing constructed in former years. Seventy-four thousand one hundred and fifty-seven feet were repaired as follows:

Name of tract.	Fence constructed in feet.	Fence repaired in feet.	Cost.		
			Rs.	As.	P.
Ajmere.					
Mohwa-Madar Hill	...	18,089	78	0	6
Nag Pahar	...	9,700	78	1	6
Taragarh Valleys	400	...	31	6	0
Rajaosi	3,486	17,242	151	9	0
Srinagar-Bir	12,209	4,999	228	2	0
Total ...	16,095	50,030	567	3	0
Merwara.					
Chang Tract	2,663	3,891	183	0	0
Delwara-Chang Birs	...	20,236	118	1	0
Total ...	2,663	24,127	301	1	0
Grand total ...	18,758	74,157	868	4	0

Ajmere.—In the Taragarh Valleys a portion of the boundary toward Somalpur was fenced with dry stone walling at a cost of Rs. 31-6-0 to prevent the inroads of cattle from the village of Somalpur. The unfenced portion of the boundary of the Jajaosi tract measuring 3,486 feet was also fenced during the year, and 17,242 feet repaired at a total cost of Rs. 151-9-0. This tract has now been completely fenced on all sides. In the Nag Pahar tract the cost of repairing the hedge was As. 12-10 per 100, rather dearer than the Mohwa-Madar Hill, as the Euphorbia bush had to be carried a greater distance. A portion of the boundary towards Raegarh and Srinagar was fenced with 6,230 feet Euphorbia hedge and 5,979' × 3' × 2' dry stone walling. The tracts in Ajmere have now been completely fenced in all necessary places, but the nalas still require to be protected by wire fencing.

Merwara.—A portion of the boundary towards Chang, Gwarri and Kanhpura was left unfenced in former years; the villagers took advantage of this fact to graze their cattle in the forest by stealth. It was, therefore, found necessary to protect the portion by stone walls as far as Sendra, leaving outlets in the beds of the nalas. These will also require to be protected by wire fencing.

19. The following statement shews the total fencing of each tract:

Name of District.	Name of Tract.	Length of boundary feet.	Length of fencing feet.	Boundary unfenced feet.
Ajmere ...	Mohwa-Madar Hill ...	86,022	65,414	20,608
Ditto ...	Nag Pahar ...	69,595	42,617	26,978
Ditto ...	Taragarh Valleys ...	57,100	2,119	54,981
Ditto ...	Rajaosi ...	36,586	36,586	...
Ditto ...	Srinagar-Bir ...	96,589	56,909	39,680
	Total ...	345,892	203,645	142,247
Merwara ...	Chang ...	53,594	25,767	27,827
Ditto ...	Hattun ...	78,607	59,271	19,336
Ditto ...	Biliawas ...	75,476	...	75,476
Ditto ...	Barakhan ...	205,350	28,190	177,160
Ditto ...	Borwar-Kotra ...	90,609	11,859	78,750
Ditto ...	Ans Pahar ...	76,127	3,300	72,827
Ditto ...	Delwara-Chang Bira ...	43,205	41,793	1,412
	Total ...	622,968	170,180	452,788
	Grand total ...	968,860	373,825	595,035

The boundary of all the tracts in both districts measures 968,860 feet, of which 373,825 feet are protected, and 595,035 feet unprotected. Fencing has only been constructed in places subject to inroads of cattle.

20. The cost of construction and repairs of inspection paths was as follows:

Name of District.	Name of Tract.	Length of inspection path newly constructed.	Length of inspection path repaired.	Cost.
				Rs. As. P.
Ajmere ...	Taragarh Valleys ...	Not known.		122 11 6
		Feet.	Feet.	
Ditto ...	Nag Pahar ...	...	5,400	38 3 9
	Total ...	...	5,400	160 15 3
Merwara ...	Chang ...	2,550	36,475	40 0 0
Ditto ...	Todgarh and Barakhan ...	...	77,900	110 0 0
	Total ...	2,550	114,375	150 0 0
	Grand total ...	2,550	119,775	310 15 3

The above expenditure was necessary to ensure proper supervision of the forest tracts.

BUILDINGS.

21. The cost of buildings used for forest purposes has been as follows:

Name of District.	Name of Tract.	Cost.
		Rs. As. P.
Ajmere	Taragarh Valleys	147 7 9
Ditto	Nag Pahar	0 4 0
Ditto	Srinagar-Bir	23 3 6
Ditto	Main Nursery	7 8 0
Ditto	Ajmere Godown	0 15 0
	Total ...	179 6 3
Merwara	Chang	0 15 0
Ditto	Todgarh and Barakhan ...	9 0 0
Ditto	Borwar-Kotra	95 9 0
Ditto	Delwara and Chang Birs ...	80 10 7
Ditto	Beawar Nursery	63 5 0
Ditto	Bell of Arms ditto	126 11 6
	Total ...	376 3 1
	Total, both districts ...	555 9 4

The Barinal Chowki in the Taragarh Valleys required constant repairs, and it was therefore found better to re-construct it of pucka masonry. The bungalow on the Nag Pahar, injured by a storm in the hot season of 1878, has now been put in thorough repairs at a cost of Rs. 310. Towards the end of 1877 the construction of two chowkis in the Borwar and Kotra tract was begun and finished at a cost of Rs. 167-11-0, of which Rs. 79-4-0 were shown in the accounts for 1877-78, and Rs. 88-7-0 are included in the Rs. 95-9-0 entered in the above statement.

PLANTATIONS.

22. The cost of planting and maintaining trees compared with 1877-78 stands as follows:

Name of District.	Name of Tract.	1877-78.	1878-79.
		Rs. As. P.	Rs. As. P.
Ajmere ...	Mohwa-Madar Hill ...	306 4 8	165 6 4
Ditto ...	Nag Pahar ...	336 7 6	255 1 9
Ditto ...	Taragarh Valleys ...	444 11 0	432 15 11
Ditto ...	Srinagar-Bir ...	153 5 3	105 11 3
Ditto ...	Shikast Masjid ..	65 7 5	65 3 8
	Total ...	1,306 3 10	1,024 6 11
Merwara ...	Chang ...	104 13 6	90 11 2
Ditto ...	Hattun-Sheopura ...	84 0 6	84 2 0
Ditto ...	Biliawas-Taragarh ...	72 2 6	82 12 6
Ditto ...	Todgarh-Barakhan ...	141 2 9	83 4 0
Ditto ...	Chang-Delwara Birs ...	73 9 11	193 14 3
	Total ...	475 13 2	534 11 11
	Grand total ...	1,782 1 0	1,559 2 10

23. The expenditure on the Ajmere and Beawar nurseries has been as follows during the year under report:

Particulars.	Ajmere.	Beawar.
	Rs. As. P.	Rs. As. P.
Malis	192 0 0	408 0 0
Sowing and planting	3 13 0	31 6 9
Watering apparatus	24 10 1	24 11 11
Protection from frost	7 8 0	9 6 0
Feed of cattle	1 1 6	6 11 2
Chowki	7 8 0	63 5 0
Deepening well	89 2 0	0 0 0
Total ...	325 10 7	543 8 10

The expenditure during the three years immediately preceding was as follows;

Years.	Ajmere.	Beawar.
	Rs. As. P.	Rs As. P.
1875-76	.....	757 1 10
1876-77	1,467 15 4	671 6 4
1877-78	474 14 6	531 14 9
Total ...	1,942 13 10	1,960 6 11

The Nursery in the neighbourhood of Ajmere was first started in 1876-77.

SOWING OPERATIONS.

24. The cost of sowing operations has been as follows:

Name of District.	Name of Tract.	Amount.	Total.
		Rs. As. P.	Rs. As. P.
Ajmere ...	Mohwa-Madar Hill ...	11 2 9	
Ditto ...	Nag Pahar	9 7 2	
Ditto ...	Taragarh Valleys ...	13 5 3	
Ditto ...	Srinagar-Bir ...	16 7 7	
Ditto ...	Rajaosi	6 14 4	
			57 5 1
Merwara ...	Chang ...	19 13 6	
Ditto ...	Hattun and Sheopura ...	27 14 8	
Ditto ...	Biliawas and Taragarh ...	27 7 3	
Ditto ...	Todgarh and Barakhan ...	22 7 4	
Ditto ...	Delwara-Chang Birs ...	27 11 0	
			125 5 9
	Total ..	...	182 10 10

In Mohwa-Madar Hill $5\frac{3}{10}$ maunds of seeds of babul, orinja, khair, dhak, salar and nim were thrown into the cactus bushes from the top of the hills at an average cost of Rs. 2-3-0 per maund. In the Nag Pahar tract $10\frac{8}{10}$ maunds seeds were sown in the same manner as in the Mohwa-Madar, and the cost has been As. 14 per maund. In the Taragarh Valleys $6\frac{26}{40}$ maunds of babul, orinjā, dhak, &c., were thrown in like manner, and 23 seers of jamun, amaltas, &c., were sown in the nursery at a total cost of Rs. 13-5-3 or Rs. 1-11-0 per maund. Nine maunds and 26 seers seeds of babul, khair, dhak, &c., were thrown into the cactus bushes in the Srinagar tract at a cost of Rs. 16-7-7 or Rs. 1-12-0 per maund. Eleven maunds and 37 seers of seeds of sorts were sown in the Rajaosi tract in the same manner as in the other tracts at a cost of Rs. 6-14-4 or Rs. 1-12-0 per maund. In the Chang Tract nine maunds and nine seers of various sorts of seeds were sown broadcast. About 16 maunds were sown in the same manner in the Hattun and Sheopura tract. Babul seeds sown in three or four fields in this tract during previous years by the plough have produced trees varying in height from three to six feet. In the Biliawas and Todgarh tracts a quantity of seed was sown broadcast. In the Chang and Delwara Birs 30 maunds and 37 seers of seeds sown by the plough and broadcast germinated fairly well, but the young trees were damaged by frost. The general result of sowing operations has been much more satisfactory

than was at first supposed. Many young khair, babul, zhinzha, dhak trees, which were thought to have died in 1875 and 1876, have thrown out fresh shoots.

25. The plan of throwing the seeds into the existing cactus bushes has been copied by us from what has been observed in nature. In almost all clumps of cactus, trees are found growing out of the centre, the seed having evidently been deposited there by birds or wind, and fructifying in the vegetable mould created by the decaying cactus and protected from animals by the living cactus. These trees have been found to be most prosperous.

26. The Inspector General of Forests, during his inspection of the Todgarh tract in December 1878, cut 82 dhaukra trees in two places in order to ascertain their coppicing powers. Half of the stumps were ordered to be covered with clay, and half left as they were in order to ascertain which method answered best. Unfortunately by some mistake none of them were covered with clay. All the stumps have however sprouted. Finding this to be the case on the 6th July last, 80 trees were under my orders cut by the Assistant Commissioner in the same tract, half being covered with clay and half left alone. All the stumps covered with clay threw out new shoots first, and the uncovered ones a few days after. The experiment shows that the method of covering stumps with clay answers best, but that it does not appear a very material point.

Requirements of the People.

27. Ajmere.—The zemindars interested in the Mohwa-Madar, Nag Pahar and Srinagar tracts were granted permits to cut grass for a fixed period. In the Mohwa-Madar and Srinagar tracts extra chowkidars were entertained at the expense of the zemindars to prevent strangers cutting grass, and thus the people were benefited. The grass in the portion of the Nag Pahar and Mohwa-Bir, belonging to the Nazul Fund, was sold for Rs. 625 and Rs. 350 respectively, and the sale proceeds were credited to the Nazul Fund. In the Taragarh Valleys the inhabitants of Ajmere, Boraj, Kazipura, &c., are permitted to cut grass according to existing arrangements. It was found desirable to give these people printed permits to cut grass in order to prevent disputes which used to occur in previous years. Two extra chowkidars were entertained to see that no damage was done to the trees, &c., during the period the grass was being cut and removed.

28. The Assistant Commissioner Merwara, reports that during the drought of 1877-78 the villagers experienced the advantage of forest conservancy. The wild plums were used as food mixed with grain, and grass was given on application free of charge. Grazing was allowed in the Ans Pahar, Biliawas and Sheopura tracts on payment of fees; the villagers having rights in the forest were charged only half rates. One hundred and fifty-nine people holding such rights were granted permission to graze their cattle in the reserved forest till the end of May 1879. During the year 33 trees only were given to zemindars from the Todgarh tract for agricultural and household purposes.

Financial Results.

29. The revenue and expenditure from 1872-73 stand as follows:

Years.	Receipts.	Expenditure.		
		A.	B.	Total.
	Rs.	Rs.	Rs.	Rs.
1872-73	24	4,878	8,177	13,055
1873-74	246	15,777	8,301	24,078
1874-75	203	17,753	8,813	26,566
1875-76	410	12,963	14,383	27,346
1876-77	905	11,432	11,025	22,458
1877-78	3,002	6,961	7,965	14,926
1878-79	1,241	5,182	8,263	13,445
Total ...	6,031	74,947	66,927	1,41,874

The average expenditure per annum is 20,268, which gives about As. 5 per acre.

30. The sum of Rs. 1,240-12-0 revenue includes the following items :

Particulars.	Ajmere.	Merwara.	Total.
	Rs. As. P.	Rs. As. P.	Rs. As. P.
Sale of charcoal	.....	200 0 0	200 0 0
Bamboo baskets	.....	41 0 0	41 0 0
Balis	.....	15 0 0	15 0 0
Firewood	35 5 11	6 5 6	41 11 5
Grazing and fodder grass ...	37 0 7	128 2 0	165 2 7
Sale of fruit trees	149 0 0	.....	154 12 3
Castor oil seeds	5 12 3	.....	
Confiscated wood	1 2 1	.....	1 2 1
Fines	351 13 9	260 14 3	612 12 0
Other sources	7 7 2	1 12 6	9 3 8
Total ...	587 9 9	653 2 3	1,240 12 0

The expenditure under A is made up thus—

Particulars.	Ajmere.	Merwara.	Total.
	Rs. As. P.	Rs. As. P.	Rs. As. P.
Cost of charcoal	.....	5 7 0	5 7 0
Collecting minor produce	5 12 3	7 0 0	12 12 3
Purchase of cattle	.....	60 0 0	60 0 0
Feed of cattle	1 14 6	6 11 2	8 9 8
Tools	58 4 0	.....	58 4 0
Inspection paths	160 15 3	150 0 0	310 15 3
Buildings	179 6 3	376 3 1	555 9 4
Demarcation	.....	26 12 3	26 12 3
Planting and maintaining trees ...	1,024 6 11	534 11 11	
Deduct cost of feed of cattle ...	—0 13 0		
Balance ...	1,023 9 11	534 11 11	
Cost of nurseries	317 1 1	473 8 8	
Sowing	57 5 1	125 5 9	
Pruning	12 12 3	.....	
Nadis	.....	7 6 0	2,094 1 10
Coppicing trees	.....	6 15 0	
Seeds in stock	16 3 7	.....	
General establishment ...	118 2 1	.....	
Church compound	1 0 6	.....	
Protection from fire	.....	581 3 4	581 3 4
Fencing	567 3 0	301 1 0	868 4 0
Total ...	2,519 9 9	2,662 5 2	5,181 14 11

REMARKS ABOUT SPECIAL TREE SEEDS.

Eucalyptus.

31. The seeds were sown in the Ajmere main nursery on the following dates:—

3rd June 1878.—Came up on the 11th June but immediately died.

27th July 1878.—Did not germinate.

24th February 1879.—Fifteen plants sprung up on the 4th March 1879, and are at present 8 inches high.

Some seeds were also sown in the Mirshahali Garden nursery, but did not germinate.

Mesquit Bean.

The seeds were sown in the—

Barinal in the Taragarh Valleys on the 28th May 1878.—They came up on the 14th June 1878, and were transplanted in the nursery. Twenty plants are alive.

Main nursery, 15th June 1878.—Came up on 3rd July, and were also transplanted in the nursery, and are doing well.

Beawar Nursery, May and June 1878.—Germinated fairly well; trees are now three feet high.

Mirshahali Garden, 14th June 1878.—Came up on the 25th June 1878; the plants are doing well.

Pithecolobium Saman.

These seeds were sown on the 2nd March 1879 in the Ajmere nursery, but they did not germinate. On the second occasion some seeds were soaked for 24 hours and sown on the 20th March, from which eight plants came up on the 30th idem, and are now 6 inches to 8 inches high, and have been transplanted in the nursery. The seeds sown in the Beawar nursery and Dilwara Bir however failed.

General Remarks.

32. The forest reserves have, I think, made fair progress during this year; the rains have been good, and they are fairly protected; growth of scrub is promising; big timber we can scarcely ever expect, but I have no doubt that the greatest benefit will accrue to the district by cautious protection of these reserves, the prejudice against the land being taken up is gradually diminishing, and the Thakurs and others have begun in a small way to initiate a like system of protection in their own estates. In a short time the income should increase; even now if we had a competent official to superintend operation, we should be able by thinning and pruning to obtain an income at once with advantage to our reserves.

33. Mr. White and Captain Robertson have both taken much trouble in superintending forest arrangements. They are both of them without the technical knowledge required usually by a forest officer, but considerable advantage results and harmony in working is obtained by the control being in their hands. Certain reserves in wards estates, road avenues and local gardens are efficiently supervised by these officers, which could not otherwise be so successfully arranged for with so little extra expense. Mahomed Anwar Khan, in charge of Merwara reserves, is supposed to be a trained forest official; he is not altogether satisfactory, and requires so much supervision that he would be better placed under a professional forest officer. Munshi Chhuttan Lal, in charge Ajmere reserves, is a clever and intelligent man, but wanting in aptitude for forest work; he has done fairly well.

ANNUAL FORM No. 45.

Forest Department, Ajmere-Merwara Area of Reserved Forests, 1878-79.

Division or Range.	Name of Forest.	Area on 1st April 1878.		Added during the year.		Excluded or transferred to other heads.		Total on 31st March 1879.		No. and date of Notification of additions and transfers, &c.	Remarks.
		Square miles.	Acres.	Square miles.	Acres.	Square miles.	Acres.	Square miles.	Acres.		
Ajmere ...	Mohwa-Madar Hill ...	4	252	...	...	...	...	4	252		
	Nag Pahar	4	100	...	...	...	...	4	100		
	Taragarh Valleys ...	1	376	...	...	...	...	1	376		
	Srinagar-Bir	5	375	...	...	...	...	5	375		
	Rajaosi	1	620	...	...	...	...	1	620		
	Total ...	17	443	...	...	...	...	17	443		
Merwara ...	Chang	3	421	...	...	...	...	3	421		
	Hattun and Sheopura ...	3	..	...	...	...	...	3	...		
	Biliawas and Taragarh ...	4	612	...	...	...	...	4	612		
	Todgarh and Barakhan ...	62	368	...	...	...	...	62	368		
	Delwara and Chang Birs ...	...	235	...	...	...	...	...	235		
	Borwar and Kotra ...	6	83	...	...	...	...	6	83		
	Ans Pahar	2	186	...	...	...	...	2	186		
	Total ...	82	625	...	...	...	...	82	625		
	Grand total ...	100	428	...	..	...	...	100	428		

ANNUAL FORM No. 46.

Forest Department, Ajmere-Merwara — Area of Plantations, 1878-79.

Division.	Name of Plantation.	On 1st April 1878.		During 1878-79.		On 31st March 1879.		Remarks.
		Area.	Total cost.	Area added.	Cost.	Total area.	Total cost.	
	Out of the area taken up under the Regulation.	Acres.	Rs. As. P.	Acres.	Rs. As. P.	Acres.	Rs. As. P.	
Ajmere ...	Mohwa-Madar Hill	70	4,946 8 5	13	165 6 4	83	5,111 14 9	
	Nag Pahar	22	5,109 8 8	1	255 1 9	23	5,364 10 5	
	Taragarh Valleys	54	4,786 8 8	42*	432 15 11	96	5,219 8 7	* In last year's statement only 54 acres were entered by mistake instead of 94, and the difference of 40 acres has been added to the two acres covered during 1878-79.
	Srinagar-Bir	3	343 8 9	5	105 11 3	8	449 4 0	
	Total ...	149	15,186 2 6	61	959 3 3	210	16,145 5 9	
Merwara ...	Chang tract	14	669 10 3	1	90 11 2	15	760 5 5	
	Hattun and Sheopura	28	624 7 6	2	84 2 0	30	708 9 6	
	Biliawas and Taragarh	9	403 11 9	3	82 12 6	12	486 8 3	
	Todgarh and Barakhan	45	331 1 10	1	83 4 0	46	414 5 10	
	Delwara and Chang Birs	64	266 8 11	2	193 14 3	66	460 7 2	
	Total ...	160	2,295 8 3	9	534 11 11	169	2,830 4 2	
	Grand total ...	309	17,481 10 9	70	1,493 15 2	379	18,975 9 11	

		TRACTS NOT TAKEN UP BY THE REGULATION.									
Ajmere	...	Shikast Masjid	6	485 11 10	...	65 3 8		6	783 11 8	Nazul patch.	
		General charges up to 31st March 1875	...	232 12 2	...	.....					
		Total Plantations ...	315	18,200 2 9	70	1,559 2 10		385	19,759 5 7		
		NURSERIES.									
Ajmere	...	Main Nursery	1	1,942 13 10	...	325 10 7		1	2,268 8 5		
		Shahjahani ditto	11	808 14 11	...	.....		11	1,506 6 11		
		General charges up to 31st March 1875	...	697 8 0	...	.....					
		Bibi Chihla	9	80 5 5	...	.....		9	113 14 3		
		General charges up to 31st March 1875	...	33 8 10	...	.....					
		Total ...	21	3,563 3 0	...	325 10 7		21	3,888 13 7		
Merwara	...	Beawar Nursery	27	2,898 12 6	1	543 8 10		28	4,522 9 0		
		General charges up to 31st March 1875	...	1,080 3 3	...	.....		...	.....		
		Grand Total ...	48	7,542 3 2	1	869 3 5		49	8,411 6 7		

FORM No. 47.

Forest Department, Ajmere-Merwara.

Area of forest tracts protected from fire during the dry season of 1879 (to accompany report for 1878-79).

Division.	Forest tracts.	Up to 30th June 1878.		During dry season of 1879.					Year when protection commenced.	Remarks.
		Area actually protected.	Total cost.	Area attempted to be protected.	Failures.	Actually protected.	Amount expended.	Total cost up to 30th June 1879.		
		A.	Rs. As. P.	A.	A.	A.	Rs. As. P.	Rs. As. P.		
Ajmere ...	Taragarh Valleys ...	300	152 8 1	...	...	...	.....	152 8 1	1874	
Ditto ...	Nag Pahar ...	...	.....	...	...	...	*15 0 0	15 0 0	...	* Reward to zemindars, &c., for extinguishing a fire.
Merwara ...	Biliawas ...	3,172	339 2 0	3,172	...	3,172	54 15 6	394 1 6	1874	
Ditto ...	Todgarh ...	40,048	1,668 14 4	40,048	27	40,021	474 14 4	2,143 12 8	1874	
Ditto ...	Ans Pahar ...	1,466	32 10 0	1,466	...	1,466	80 4 0	112 14 0	1877	
	Total ...	44,986	2,193 2 5	44,686	27	44,659	625 1 10	2,818 4 3	...	

Charged in previous years ...	...	2,127 5 1
Ditto 1878-79	...	581 3 4
Ditto 1879-80	...	109 11 10
Total	...	2,818 4 3

FORM No. 48.

Forest Department, Ajmere and Merwara.

Prosecutions for breaches of Forest Rules, 1878-79.

Forest Division and Civil District.	Injury to Forests by fire.		Unauthorized felling or appropriation of wood and minor forest produce.		Grazing without permission, or in tracts in which grazing is prohibited.		Other offences.		Total.			
									Prosecutions.		Convictions.	
	Cases.	Persons.	Cases.	Persons.	Cases.	Persons.	Cases.	Persons.	Cases.	Persons.	Cases.	Persons.
Ajmere	1	2	100	213	6	15	...	...	107	230	94	195
Merwara	...	...	36	177	10	31	...	...	46	208	37	121
Total ...	1	2	136	390	16	46	...	...	153	438	131	316

ANNUAL FORM No. 49.

Forest Department, Ajmere-Merwara.

Summary of Revenue of the different Divisions, 1878-79.

Budget heads receipts.	Ajmere Division.	Merwara Division.	Total.
I.—Timber and other produce removed from the forests by Government Agency:	Rs. As. P.	Rs. As. P.	Rs. As. P.
a. Timber.			
b. Firewood and charcoal ...	.....	200 0 0	200 0 0
c. Bamboos.			
d. Sandal-wood.			
e. Grass and other minor produce.	.....	41 0 0	41 0 0
II.—Timber and other produce removed from the forests by consumers or purchasers:			
a. Timber	.....	15 0 0	15 0 0
b. Firewood and charcoal ...	35 5 11	6 5 6	41 11 5
c. Bamboos.			
d. Grazing and fodder grass	37 0 7	128 2 0	165 2 7
e. Other minor produce ...	154 12 3	.....	154 12 3
III.—Confiscated, drift and waif wood.	1 2 1	.....	1 2 1
IV.—Revenue from forests not managed by Government:			
a. Duty on foreign timber and other forest produce.			
b. Revenue from shared and private forests.			
V.—Miscellaneous:			
a. Fines and forfeitures ...	351 13 9	260 14 3	612 12 0
b. Refunds.			
c. Other sources	7 7 2	1 12 6	9 3 8
Total Receipts ...	587 9 9	653 2 3	1,240 12 0

ANNUAL FORM No. 49.

Forest Department, Ajmere-Merwara.

Summary of expenditure of the different Divisions, 1878-79.

Budget heads. A.—Conservancy and Works.	Ajmere Division.	Merwara Division.	Total.
I.—Timber and other produce removed from the forests by Government Agency:	Rs. As. P.	Rs. As. P.	Rs. As. P.
a. Timber.			
b. Firewood and Charcoal ...	.....	5 7 0	5 7 0
c. Bamboos.			
d. Sandal-wood.			
e. Grass and other minor produce.	.....	.....	.....
II.—Timber and other produce removed from the forests by consumers or purchasers.	5 12 3	7 0 0	12 12 3
III.—Confiscated, drift and waif wood.			
IV.—Revenue from forests not managed by Government:			
a. Duty on foreign timber and other forest produce.			
b. Revenue from shared and private forests.			
V.—Rent of leased forests and payments to shareholders in forests managed by Government.			
VI.—Live and dead stock:			
a. Purchase of cattle ...	.....	60 0 0	60 0 0
b. Feed and keep of cattle ...	1 14 6	6 11 2	8 9 8
c. Plant, tools and instruments	58 4 0	.....	58 4 0
VII.—Communications and buildings:			
a. Roads and bridges ...	160 15 3	150 0 0	310 15 3
b. Buildings ...	179 6 3	376 3 1	555 9 4
c. Other works.			
VIII.—Demarcation, improvement and extension of forests:			
a. Demarcation ...	.....	26 12 3	26 12 3
b. Compensation for land and rights.			
c. Surveys and working plans.			
d. Plantations	1,546 2 6	1,147 15 4	2,694 1 10
e. Protection from fire ...	.....	581 3 4	581 3 4
f. Other works	567 3 0	301 1 0	868 4 0
IX.—Miscellaneous:			
a. Refunds.			
b. Law charges.			
c. Other charges.			
Total A.—Conservancy and Works ...	2,519 9 9	2,662 5 2	5,181 14 11

ANNUAL FORM No. 49.

Forest Department, Ajmere-Merwara.

Summary of Expenditure of the different Divisions, 1878-79.

Budget heads. B.—Establishments.	Ajmere Division.			Merwara Division.			Total.		
	Rs.	As.	P.	Rs.	As.	P.	Rs.	As.	P.
Brought forward Total A.—Conservancy and Works.	2,519	9	9	2,662	5	2	5,181	14	11
I.—Salaries:									
a. Conservators.									
b. Superior Officers ...	.....			2,250	0	0	2,250	0	0
c. Subordinate forest and depôt establishments.	1,279	8	5	1,969	0	0	3,248	8	5
d. Office establishments ...	1,134	1	9	360	0	0	1,494	1	9
e. Deputation and special allowances.									
II.—Travelling allowances:									
a. Conservators.									
b. Superior Officers ...	.....			667	12	0	667	12	0
c. Subordinate forest and depôt establishments.									
d. Office establishments ...	23	10	0	77	5	1	100	15	1
III.—Contingencies:									
a. Stationery ...	19	4	0	16	8	0	35	12	0
b. Carriage of tents and records	42	9	0	235	8	1	278	1	1
c. Pay of police guards.									
d. Sundries	97	6	6	73	14	3	171	4	9
e. Official postage ...	10	0	0	6	12	0	16	12	0
Total B.— Establishments ...	2,606	7	8	5,656	11	5	8,263	3	1
Grand Total of Expenditure ...	5,126	1	5	8,319	0	7	13,445	2	0

ANNUAL FORM NO. 50.

Dr. Forest Department, Ajmere-Merwara Account current for the year 1878-79. *Cr.*

	Rs. As. P.	Rs. As. P.		Rs. As. P.	Rs. As. P.
To cash balance	.....	.....	By expenditure under A—		
To revenue received in cash—			Ajmere	2,519 9 9	
Ajmere	587 9 9		Merwara	2,662 5 2	
Merwara	453 2 3				5,181 14 11
		1,040 12 0	By expenditure under B—		
To revenue adjusted by book transfer, Public Works Department—			Ajmere	2,606 7 8	
Merwara	200 0 0		Merwara	5,656 11 5	
		200 0 0			8,263 3 1
To remittances from State Treasuries—			By revenue remittances to State Treasuries—		
Ajmere	5,472 11 1		Ajmere	586 13 6	
Merwara	8,088 8 7		Merwara	453 2 3	
		13,561 3 8			1,039 15 9
To advances recoverable—			By revenue remittances adjusted by book transfer—		
Ajmere	88 5 11		Merwara	200 0 0	
Merwara	430 8 0				200 0 0
		518 13 11	By advances recoverable—		
To deposits received—			Ajmere	435 11 10	
Ajmere	5 0 0		Merwara	200 0 0	
		5 0 0			635 11 10
			By deposits repaid—		
			Ajmere	5 0 0	
					5 0 0
Total ...		15,325 13 7	Total ...		15,325 13 7

ANNUAL FORM No. 51.

Forest Department, Ajmere-Merwara. Statement of Outstandings and Liabilities on account of Disbursers, 1878-79.

Division.	Department Debtor.			Department Creditor.			Balance due.		Remarks.
	At commencement of year.	Recoveries in cash and value of supplies and work done during the year.	At close of year.	At commencement of year.	Payments made during year.	At close of year.	To Department (Outstandings).	By Department (Liabilities).	
	Rs. As. P.	Rs. As. P.	Rs. As. P.	Rs. As. P.	Rs. As. P.	Rs. As. P.	Rs. As. P.		
Ajmere ...	28 7 2	88 5 11	116 13 1	.....	435 11 10	435 11 10	318 14 9		
Merwara ...	44 0 0	430 8 0	474 8 0	700 0 0	200 0 0	900 0 0	425 8 0		
Total ...	72 7 2	518 13 11	591 5 1	700 0 0	635 11 10	1,335 11 10	744 6 9		

Abstract of receipts and charges on account of Forest Administration in Ajmere and Merwara from the 1st April 1872 to the 31st March 1879.

	Receipts.	Charges against		Total charges.	Net charges.
		Plantations.	Reserves.		
AJMERE.	Rs. As. P.	Rs. As. P.	Rs. As. P.	Rs. As. P.	Rs. As. P.
Mohwa Madar Hill	188 6 0	5,111 14 9	8,263 0 2	13,374 14 11	13,186 8 11
Nag Pahar	276 13 2	5,364 10 5	9,977 9 8	15,342 4 1	15,065 6 11
Taragarh Valleys	376 15 8	5,219 8 7	9,363 0 6	14,582 9 1	14,205 9 5
Shikast Masjid	24 8 1	783 11 8	.....	783 11 8	759 3 7
Tracts abandoned and other charges	108 14 11	15,108 7 8	11 8 0	15,119 15 8	15,011 0 9
Srinagar Bir	1,311 14 4	449 4 0	4,101 1 8	4,550 5 8	3,238 7 4
Rajaosi	26 8 6	.....	918 9 7	918 9 7	892 6 1
Ajmere Nursery	109 10 7	2,208 8 5	.....	2,208 8 5	2,098 13 10
General	1,791 4 5	.....	28,158 1 9	28,158 1 9	26,366 13 4
Shahjahani Nursery	.....	1,506 6 11	.....	1,506 6 11	1,506 6 11
Bibichihia	.....	113 14 3	.....	113 14 3	113 14 3
Stock	.....	.....	89 11 4	89 11 4	89 11 4
Total ...	4,274 10 8	35,926 6 8	60,862 10 8	96,809 1 4	92,534 6 8
MERWARA.					
Chang Tract	146 0 7	760 5 5	6,698 11 11	7,459 1 4	7,313 0 9
Hattun ditto	109 2 9	708 9 6	6,984 10 8	7,693 3 9	7,584 1 0
Biliawas ditto	132 9 9	486 8 3	4,134 0 9	4,620 9 0	4,487 15 3
Todgarh ditto	674 4 9	414 5 10	11,835 15 0	12,250 4 10	11,576 0 1
Delwara & Chang Bira	95 0 0	460 7 2	2,291 8 8	2,751 15 10	2,656 15 10
Beawar Nursery	186 4 9	4,522 9 0	.....	4,522 9 0	4,336 4 3
Borwar Kotra	13 0 0	.....	1,020 9 0	1,020 9 0	1,007 9 0
Anspahar	10 10 0	.....	730 14 6	730 14 6	720 4 6
General	189 6 0	.....	3,929 6 11	3,929 6 11	3,740 0 11
Stock	.....	60 0 0	.....	60 0 0	60 0 0
Dewair Jungle	.....	.....	26 12 3	26 12 3	26 12 3
Total ...	1,756 6 7	7,412 13 2	37,052 9 3	45,065 6 5	43,308 15 10
Grand Total ...	6,031 1 3	43,339 3 10	98,535 3 11	1,41,874 7 9	1,35,843 6 6

Exd.—N. C. D.

No. 909 F., dated Simla, the 10th November 1879.

From—C. BERNARD, Esq., C.S.I., Officiating Secretary to the Government of India, Home, and Revenue Agricultural Department.

To—The Surveyor General of India.

I AM directed to acknowledge the receipt of your letter No. 752F., dated the 20th ultimo, submitting with your remarks the Annual Report of the Superintendent of Forest Surveys for the year 1878-79.

2. The chief work lay in the Government forests of the Bhabar and outer hills of Kumaun. The forests near Ranikhet and some of those in the Bareilly district were also surveyed, and additions were made to the previous surveys of the Jaunsar forests. All this is in the territories subject to the control of the Government of the North-Western Provinces and Oudh; and in accordance with orders issued in 1878, the Superintendent of Forest Surveys will, as regards the work carried on by him in those territories, continue to be entirely under the control of His Honour the Lieutenant-Governor, reporting to, and receiving his orders from, the Government of the North-Western Provinces and Oudh. At the request of the Punjab Government, valuations were undertaken of the forests situated in certain Native States under the political control of that Government, and for other provinces a variety of work was done in the preparation of maps and otherwise.

No. 234F., dated the 23rd February 1878.

3. In addition to the preparation of forest maps, the Forest Survey has in previous years been utilised for the instruction of junior officers, a number of whom have been temporarily employed under Captain Bailey's orders for that purpose. It appears from the report that during the year under review no officers were sent for instruction from other provinces. His Excellency in Council trusts that the Forest Survey, though not used at present by Local Governments to the full extent contemplated for the instruction of officers of the superior staff, will yet be found useful for the instruction of apprentices and probationers sent to the Central Forest School.

4. The outlay during the survey year ending on the 30th September, to which the report relates, was as follows:—

	Rs.
Kumaun and Garhwal	38,239
Jaunsar	1,390
Bareilly	224
Valuation surveys	2,699
General	10,002
TOTAL ...	52,554

The outlay during the official year ending on 31st March 1879 amounted to Rs. 60,325.

As explained in the orders on the Budget Estimate of the Forest Survey Branch for 1879-80, it has been decided in some measure to reduce the operations of the Forest Survey. It is not intended to dispense with the services of useful men; but it is intended that such vacancies as may arise should not be filled up. The reduction will be gradual, the amount sanctioned for expenditure during the current year being Rs. 50,000 and for 1880-81 Rs. 40,000.

5. Since the appointment of Captain Bailey to the charge of the forests attached to the Central Forest School, a large share of the Superintendent's work and responsibility has devolved upon Mr. Reynolds, the Deputy Superintendent of Forest Surveys, and it is satisfactory to find from Captain Bailey's report that great credit is due to that officer for the manner in which he has conducted the duties entrusted to him. Captain Bailey has lately submitted

proposals for increasing the personal allowance granted to Mr. Reynolds in 1875. This unfortunately is not possible; but Mr. Reynolds has recently been promoted to officiate as a Deputy Conservator of Forests of the 3rd grade, and he may rest assured that his services in the Department are fully recognised.

6. The Governor General in Council has noticed with satisfaction your approval of the Forest Survey operations during the year under review.

No. 910F.

COPY forwarded for information to the Government of the North-Western Provinces and Oudh.

No. 911F.

COPY forwarded for information to the Superintendent of Forest Surveys.

Govt. Central Branch Press, Simla.—No. 699, H., R. & A. D.—14-11-79—365.

REPORT OF THE SUPERINTENDENT OF FOREST SURVEYS FOR 1878-79.

No. 752 F, dated Mussoorie, the 29th October 1879.

From—Major-General J. T. WALKER, R. E., C. B., Surveyor General of India.

To—The Offg. Secretary to the Government of India.

CAPTAIN BAILEY, R. E., the Superintendent of Forest Surveys, having, in compliance with the directions contained in your Office letter No. 754 F, dated 12th ultimo, carried his annual report on the progress of the operations of the forest surveys during the year 1878-79 to the 30th ultimo, the end of the survey year, I have the honour to re-submit it, and to repeat my approval of the work executed under his supervision, and which appears to be quite satisfactory both as regards quality and quantity.

Annual progress report of the Forest Survey Department from 1st October 1878 to 30th September 1879.

Kumaun and Garhwál Survey.

THE continuation of the survey of the forests in Kumaun (including Ránikhet) occupied nearly the whole of the field establishment for the entire season. Mr. Chill commenced work in Ránikhet on the 7th October, and the main camp left Dehra on the 12th November, reaching the Kotah Dún on the 26th; but as cholera was prevalent in that locality, Mr. Reynolds moved the camp on to Háthi Gulia on the Dabka River, where it arrived on the 20th November. The work was then taken up as follows: Mr. Reynolds undertook the survey of the Eastern side of the Kotah Dún in Sheets XLV. and XLVI.; Mr. Litchfield was detached with a party of Native Surveyors to complete the Western portion of the Kotah Dún in Sheet XXXVIII.; Mr. T. S. Marten was ordered to complete the unsurveyed portions in Sheet XXXIX. to the East of Rámnágar; and Mr. Fitzgerald, after spending some time with Mr. Litchfield to gain instruction, worked in the Iron Company's grant, Sheets XLIV. and XLV. When the work had somewhat advanced, the Office was moved Eastwards to Káladhungi, and the European Surveyors, with their assistants, moved gradually in the same direction. While the plane-tabling thus continued, the triangulation and traversing were carried on to the East of the Gola Nadi. The Secretary to the Government of the North-Western Provinces and Oudh having directed me to have the British and Nipál boundary on the Sárda River laid down on the ground from existing maps, I instructed Mr. Reynolds to undertake this work. This he did during the month of March, and the Sárda Islands (Government Reserved Forests) were at the same time surveyed. The main party under Mr. Reynolds left Káladhungi for head quarters on the 16th May. Mr. Chill's party left Ránikhet on the 30th June and returned to head quarters.

Survey of Pilibhit and Puranpur (Bareilly) Forests.

2. Orders having been received to survey the forests of Puranpur and Pilibhit in the Bareilly District, Mr. Reynolds went to Pilibhit on the 15th March to meet Mr. Ponsonby, the officer in charge of those forests. He started traversing the boundaries and some lines across the forests, and rejoined his camp in Kumaun on the 21st March. The traversing was continued until the 4th May, when the Surveyors returned to the Office at Kaladhungi.

Additions to the Jaunsár Báwar Survey.

It having been found desirable to survey some new paths and compartment boundaries in the Jaunsár Forest Division (including the leased forests), two Native Surveyors were sent there on the 5th October. They completed their work and returned to Dehra on the 21st December, when they were despatched to join Mr. Reynolds in Kumaun.

4. Appendix "A" contains a summary of the outturn of field work and computations for the season. The outturn of plane-tabling is 342·97 square miles on the scale of 4″ = 1 mile, and 3·44 square miles on the scale of 12″ = 1 mile, total 346·41 square miles, which is equivalent to a larger amount had all been on the smaller scale. I trust that the outturn may therefore be considered satisfactory. The area plane-tabled during the previous season was 326 square miles. During last as during the previous season the outturn was aided by the continuance of work at Ránikhet after the time when the heat of the lower forests rendered it impossible to work in them. The average monthly outturn of a party of one European and four Native plane-tablers was 10·2 square miles. The corresponding figures for the previous season were 10·85 square miles for one European and 5·5 Native plane-tablers. I have examined the field sheets, and I consider their quality to be very creditable to Mr. Reynolds, who, as before stated, had charge of the work, and to the Surveyors who turned them out. The distance traversed amounted to 416 linear miles within an area of 307 square miles. The number of traverse stations was 4,752. The triangulation was extended over 340 square miles, within which area 580 points were fixed. Observations with the barometer were made at 1,144 places. These figures are all less than those of the previous season which were—traversing 690 linear miles, triangulation 833 points within 470 square miles, and 1,214 observations with the aneroid barometer. This is accounted for by the fact that fewer men were employed on these works for a shorter time. The triangulation and traversing is sufficiently ahead of the plane-tabling; the area triangulated and traversed in advance being 302 square miles, and the area triangulated only being 300 square miles. The area in Kumaun and Garhwál remaining to be plane-tabled is about 773 square miles or two and a half seasons' work.

Field work.

5. Four hundred and nineteen linear miles of traversing have been computed, with an average correction on the hypothenuse of 5·7. The number of triangles worked is 1,181, and the number of points fixed thereby is 562. The heights of 162 stations have been computed trigonometrically, and the heights of 1,018 points have been worked out from observations with the barometer. Eleven great trigonometrical stations have been computed from latitude and longitude. The traverse computations are completed, and there remain no more great trigonometrical stations to be computed for next season's work. The computers are now employed on triangulation and heights, of which work there is a considerable amount still to be done. The amount remaining is about 100 triangles, 350 trigonometrical heights, and 500 barometrical heights. The average error on the traverses is ·9 per 1,000 higher than that of the previous season. It is, however, well below the limit fixed, and I will endeavour to keep it down to the lowest possible figure.

Computations.

6. A summary of the drawing done in the Office since 1st October last will be found in Appendix B. Twelve sheets of the Kumaun and Garhwál survey are in hand, but none of them can be reported as completed. Eight of the sheets will, I hope, be finished before the commencement of the field season, and the four remaining sheets will be well advanced. Sheets XXIII. and LIV. will not be quite completed. The drawing of Sheet XXXV. will be completed, but it must await some observations for height, and the same must be said of Sheet LV., which also awaits the settlement of some boundary questions. The two last Sheets (I. and III.) of the Forest Map of Pegu Division, British Burma, have been completed and printed. Maps of the forests in the School Circle, North-Western Provinces, on 1″ = 8 miles, and of the forests in Ajmere and Merwára on 1″ = 6 miles, have been drawn and printed. An enlarged map of a forest in the Chittagong District was drawn for the Conservator of Bengal.

Original drawings.

7. The collection of printed maps of the forests in the Provinces under the Government of India is progressing, and I hope soon to have complete sets for Bengal and Assam. The preparation of small-scale maps showing the forests in these Provinces is in hand. The maps and field books of ten candidates for the Department were examined and reported on. Forests were added by hand to 77 various printed sheets. Thirty-four tracings of various kinds were made and supplied to forest and other officers. The record of forest growth is in progress on eight sheets of the Kumaun and Garhwál survey. Eight hundred and twenty-two printed sheets were coloured, and 411 printed maps were cut up and mounted in book form. The details of all the miscellaneous work done in office will be found in Appendix B.

Miscellaneous work done in office.

8. A summary of expenditure from 1st October 1878 to 30th September 1879 will be found in Appendix C. The total cost of the work done in the field for Kumaun and Garhwál, including triangulation and traversing in advance, was Rs. 26,497. If the cost per mile be estimated on the area plane-tabled, the result is Rs. 77 per mile, as compared with Rs. 107 per mile for the previous season. The country surveyed was much more open than that of the previous season, which enabled the work to be turned out more rapidly, and consequently more cheaply.

Summary of expenditure.

Officers of the superior staff.

9. Mr. Reynolds held charge of the Kumaun and Garhwál field party, including the detachments working at Ránikhet and in the Bareilly forests, during the whole season, and great credit is due to him for the manner in which he has conducted the duties entrusted to him. He is now in charge of the computations and the drawing of the fair sheets. He left Dehra on the 24th November for the Kotah Dún (Kumaun) and returned to Dehra on the 17th May.

Mr. W. H. Reynolds, Deputy Superintendent, Forest Surveys.

Mr. Litchfield was employed under Mr. Reynolds in Kumaun and Garhwál during the entire field season; he left Dehra on the 22nd November and returned on 27th May. He is a very good surveyor and draughtsman, and continues to give satisfaction.

Mr. E. Litchfield, Officiating Assistant Conservator of Forests.

Mr. W. M. Kelly left to join the Revenue Survey Department on the 24th October.

Mr. W. M. Kelly, Sub-Assistant Conservator of Forests.

Mr. Murray left Dehra on the 1st October to be employed on valuation surveys in the Jaunsár Division and in the neighbouring Native States. Mr. Bagshawe, under whose orders he worked, reported exceedingly well of him. He has been transferred to the Jaunsár Forest Division from the 1st August.

Mr. J. C. Murray, Sub-Assistant Conservator of Forests.

Mr. Young joined from the Revenue Survey Department on the 27th October, and was employed until the 29th April in the head quarters Office, when he left to join the Assam Forest Department, to which he was transferred.

Mr. H. G. Young, Sub-Assistant Conservator of Forests

Forest Surveyors.

10. Mr. Chill, assisted by a party of Native plane-tablers, was employed under Mr. Reynolds from the 28th October to the 7th June in surveying the forests of the Ránikhet Division. As far as I have as yet been able to judge of his work, I think it has been executed in a satisfactory manner.

Mr. G. P. Chill.

Mr. T. S. Marten left Dehra for Kumaun on the 1st November and returned on the 9th June. During the interval he was employed under Mr. Reynolds in superintending Native plane-tablers. He has improved very much in his style of work.

Mr. T. S Marten.

Mr. Fitzgerald was employed under Mr. Reynolds in Kumaun from the 24th November to the 20th May. He was occupied in plane-tabling, at which he worked steadily, but he is not very skilful. He has lately taken charge of the map-printing.

Mr. E. Fitzgerald.

Mr. James Marten left Dehra on the 3rd October for the Tarochi State, where he was employed until the 21th December in making a valuation survey. He remained a month in Dehra to assist me in examining the previous season's fair sheets, and left on the 26th January to join Mr. Reynolds in Kumaun. He was employed in plane-tabling with a party of Native Surveyors, and turned out some very good work. He returned to Dehra on the 27th May.

Mr. James Marten.

Native Establishment.

11. The Native establishment worked satisfactorily, and the style of their work shows a considerable improvement. The average strength during the field season was as follows:

Triangulation	1
Plotting boards	1
Traversing	2½
Computing	2
Plane-tabling	21½
Barometer	1
Total in the field ...	29
At head quarters	9
Total ...	38

Dehra Dun;
The 28th October 1879.

F. BAILEY, Captain, R. E.,
Superintendent, Forest Surveys.

APPENDIX A.

Summary of the outturn of field work and computations by the Forest Survey Department from 1st October 1878 to 30th September 1879.

1.	Area plane-tabled on the scale of 4″ = 1 mile	342·97	346·41 square miles.
	Ditto ditto 12″ = 1 mile	3·44	
2.	Area triangulated	340	square miles.
3.	Number of points fixed	580	
4.	Area traversed, Bareilly	108	307 square miles.
	Ditto Kumaun and Garhwál ...	199	
5.	Linear miles traversed, Bareilly ...	126	446 linear miles.
	Ditto Kumaun and Garhwál	320	
6.	Number of traverse stations	4,752	
7.	Linear miles of traversing computed, Bareilly	78	419 linear miles. Average correction 5·57 per 1,000.
	Ditto ditto Kumaun and Garhwál	341	
8.	Number of triangles worked ...	1,131	
9.	Number of points fixed thereby ...	562	
10.	Number of great trigonometrical stations computed.	11	
11.	Number of heights worked trigonometrically	162	
12.	Number of barometrical observations ...	1,144	
13.	Number of barometrical observations computed	1,018	

Note.—For the work of the coming field season there are 302 square miles triangulated and traversed in advance, and 300 square miles triangulated only.

Dehra Dun;
The 28th October 1879.

F. BAILEY, Captain, R. E.,
Superintendent, Forest Surveys.

APPENDIX B.

Summary of outturn of drawing and miscellaneous work by the Forest Survey Department from 1st October 1878 to 30th September 1879.

ORIGINAL DRAWINGS IN PROGRESS.

		Sheets.
1.	Kumaun and Garhwál, Sheets XII., XIII., XVII., XXIII., XXXV., XXXIX., XL., XLI., LII., LIII., LIV., LV.	12
	(Eight of these sheets will probably be completed this season.)	
2.	Forest map of Pegu Division, British Burma, Sheets I., III., scale 1″ = 2 miles	2
3.	Forests of the School Circle, North-Western Provinces, 1″ = 8 miles	1
4.	Map of the Forests in the Districts of Ajmere and Merwára, scale 1″ = 6 miles	1
5.	Extract from the Revenue Survey map of the District of Chittagong, scale 1″ = 4 miles enlarged to the scale of 1″ = 1 mile	1

FORESTS DRAWN ON PRINTED MAPS.

6.	Forests entered on two sheets of a map of Lalitpur District, North-Western Provinces	2
7.	Forests entered on 1″ = 10 miles map of Berar ...	2
8.	Forests entered on 1″ = 16 miles map of the Central Provinces	2
9.	Gorakhpur forests added on Atlas Sheet No. 102 ...	1
10.	School Circle forests entered on Atlas Sheets 47 and 48	2
11.	Forests entered on sheets of the Great Trigonometrical Survey, 1″ = 1 mile Survey of Kumaun and Garhwál	24
12.	Forests entered on Ajmere and Merwára 1″ = 1 mile maps	11
13.	Ghát Bori Reserve entered on maps of Maisur and Nurnalla, Circars	7
14.	Forests entered on 1″ = 32 map of the North-Western Provinces and Oudh	3
15.	Forests entered on 64 miles = 1″ map of India ...	1
15a.	Forests entered on printed maps of Bareilly District	8
15b.	Protected forests entered on seven sheets of Kumaun and Garhwál Survey	14

TRACINGS MADE.

16.	Skeleton tracings of Kumaun and Garhwál, Sheets XVII., XXIII., XXV., XXVI., XXX., XXXI., XXXIV., LIII., LIV. for the Conservator of Forests, Central Circle	9
17.	Tracings showing the blocks of forest in Kumaun and Garhwál for the Inspector General of Forests, the Government of the North-Western Provinces and Oudh, and the Conservator of Forests, Central Circle	8

		Sheets.
18.	Skeleton tracings from the new survey of Lambatách and Deota for the Conservator of Forests, School Circle, North-Western Provinces	2
19.	Tracings of the Nipál boundary on the River Sárda for the Commissioner of Kumaun	6
20.	Various tracings for forest and other officers ...	10
20a.	Part of the Kuram Valley	4

FOREST GROWTH.

21.	Record of forest growth is in progress on Sheets XVI., XVIII., XXI., XXII., XXVII., XXVIII., XXXII., XXXIII., of Kumaun and Garhwál ...	8

MAP-COLOURING.

22.	Copies of black prints of Dehra Dún and Siwaliks, Sheets XXVIII., XXIX., XXXIII., XXXIV., XXXVI., XXXVII., XXXVIII., XXXIX., XL., XLIII. coloured	117
23.	Copies of black prints, Deoban Working Circle, Sheets I., II., III. coloured	5
24.	Copies of blue prints of ditto coloured ...	6
25.	Copies of Sheets I., II., III., IV., of Jaunsar Báwar coloured	34
26.	Copies of Sheets XVI., XVIII., XXI., XXII., XXV., XXVI., XXVII., XXVIII., XXX., XXXI., XXXII., and XXXIII., of Kumaun and Garhwál coloured	134
27.	Kumaun and Garhwál Index Charts coloured ...	8
28.	Jaunsár Charts coloured	2
29.	Dehra Dún charts do	1
30.	Sheets of Oudh Revenue Survey coloured, with forests	15
31.	North-Eastern Division, Central Provinces, No. 36 ...	1
32.	Maps coloured for the Government of Bombay ...	60
33.	Forests coloured on maps of the Bareilly District, North-Western Provinces	18
34.	Copies of map of the School Circle, North-Western Provinces	358
34a.	Copy of map of Ajmere and Merwára	1
35.	Copies of map of part of North-Western Provinces showing forests	87
36.	Maps mounted in book form	411
37.	Maps and field-books of candidates for the Department examined and reported on	10

DEHRA DUN;
The 28th October 1879.

F. BAILEY, Captain, R. E.,
Superintendent, Forest Surveys.

APPENDIX C.

Summary of expenditure from 1st October 1878 to 30th September 1879 showing the amounts expended on field and office work.

No.	Months.	Kumaun and Garhwál.		Jaunsár.		Bareilly.		Valuation surveys in Native States.		General.	Total.	Remarks.
		Office.	Field.	Office.	Field.	Office.	Field.	Office.	Field.			
		Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	
1	October 1878	1,792	.....	315	.....	.....	.....	.....	.....	1,762	3,869	
2	November 1878	1,855	203	.....	47	.....	.....	.....	.....	1,637	3,742	
3	December 1878	1,382	2,348	30	595	.....	.....	.....	566	1,209	6,130	
4	January 1879	122	1,267	5	258	.....	.....	.....	286	472	2,410	
5	February 1879	31	3,685	46	.....	.....	.....	.....	215	624	4,601	
6	March 1879	25	7,125	15	.....	.....	.....	.....	207	672	8,044	
7	April 1879	200	663	39	.....	.....	11	.....	287	641	1,841	
8	May 1879	25	7,174	20	.....	.....	118	.....	207	625	8,169	
9	June 1879	521	3,990	.....	.....	.....	51	.....	207	430	5,199	
10	July 1879	1,831	35	.....	.....	22	.....	.....	442	730	3,060	
11	August 1879	1,953	.....	20	.....	.....	.....	.....	282	618	2,873	
12	September 1879	2,005	7	.....	.....	22	.....	.....	.....	582	2,616	
	Totals ...	11,742	26,497	490	900	44	180	.....	2,699	10,002	52,554	

DEHRA DUN;
The 28th October 1879.

F. BAILEY, Captain, R. E.,
Superintendent, Forest Surveys.

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